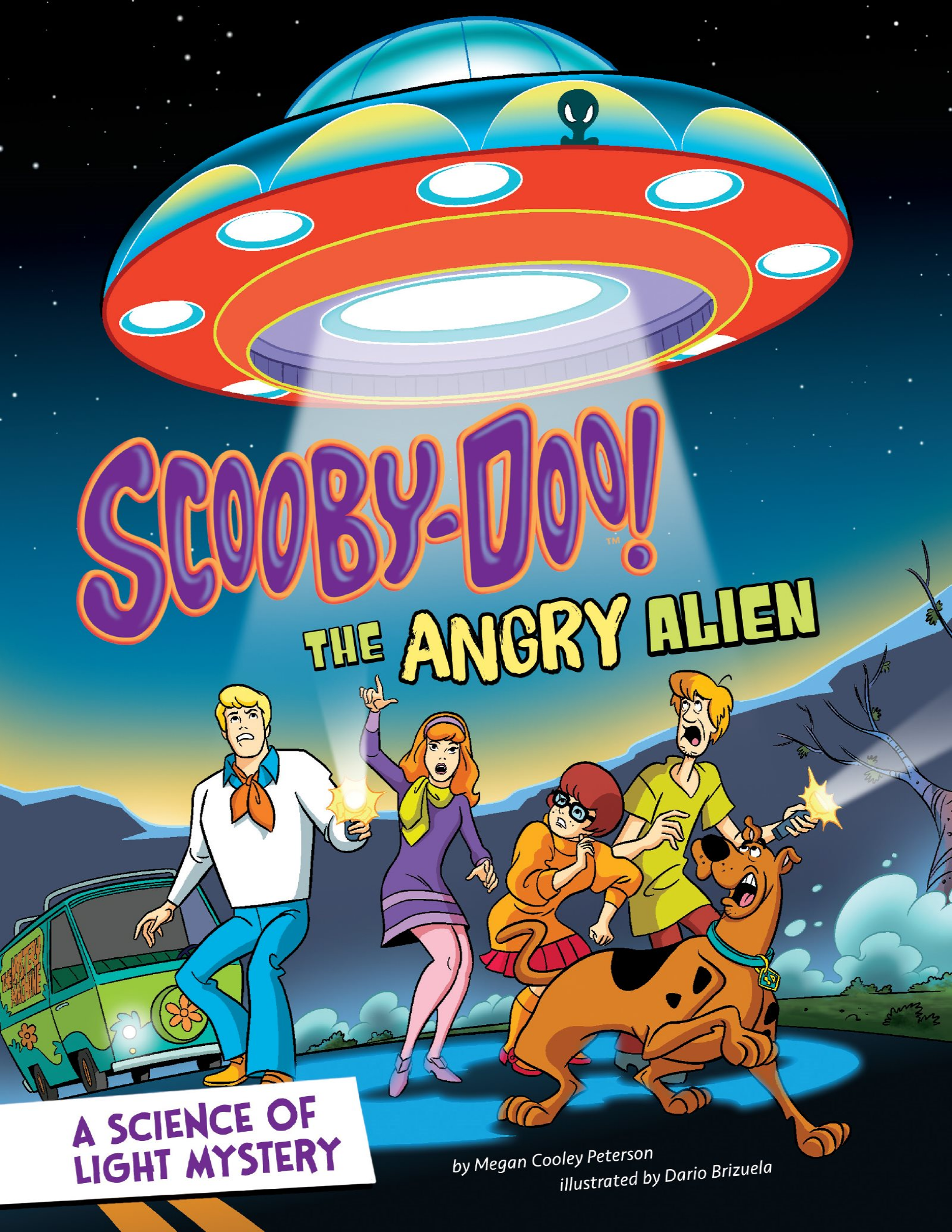
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A SCIENCE OF LIGHT MYSTERY
by Megan Cooley Peterson
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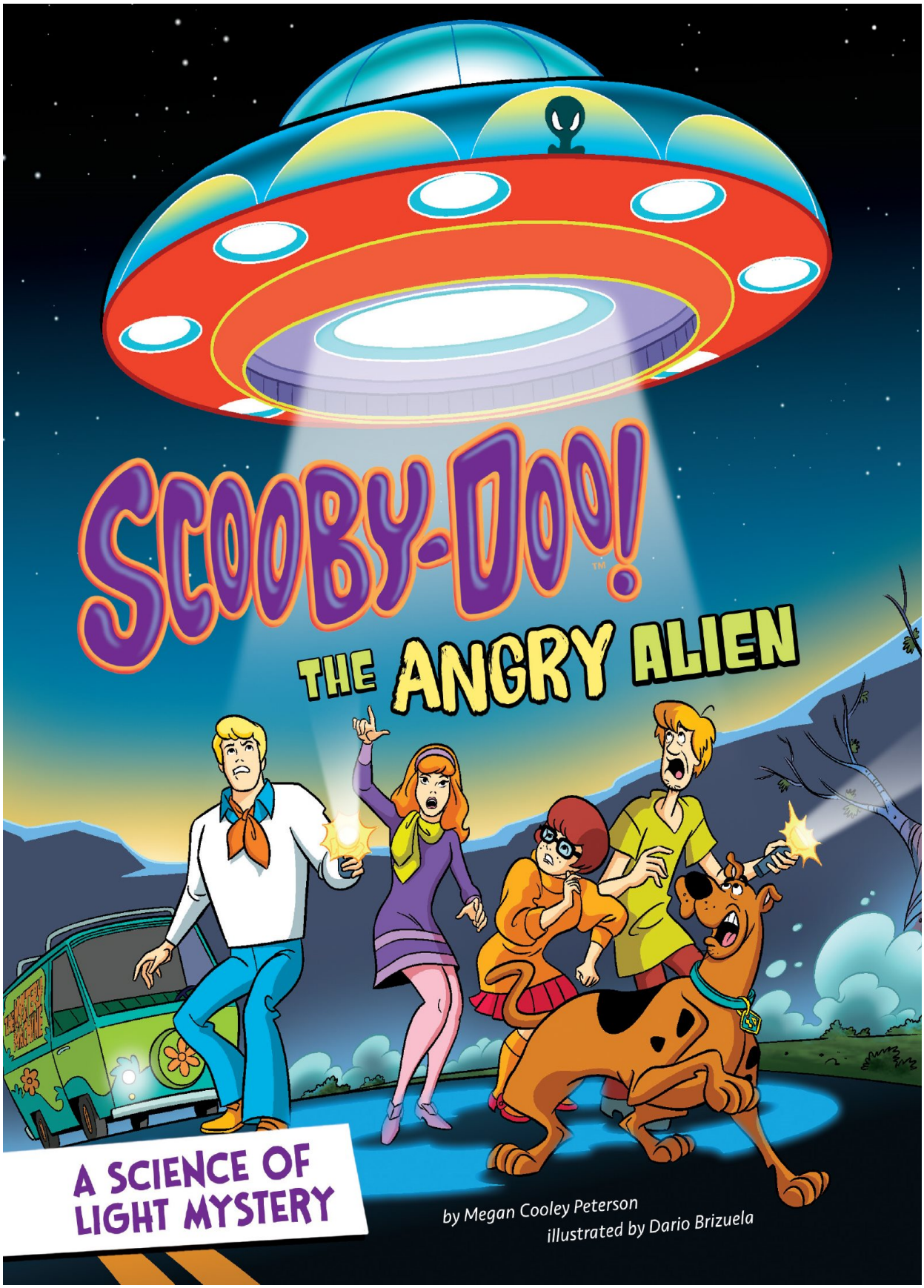
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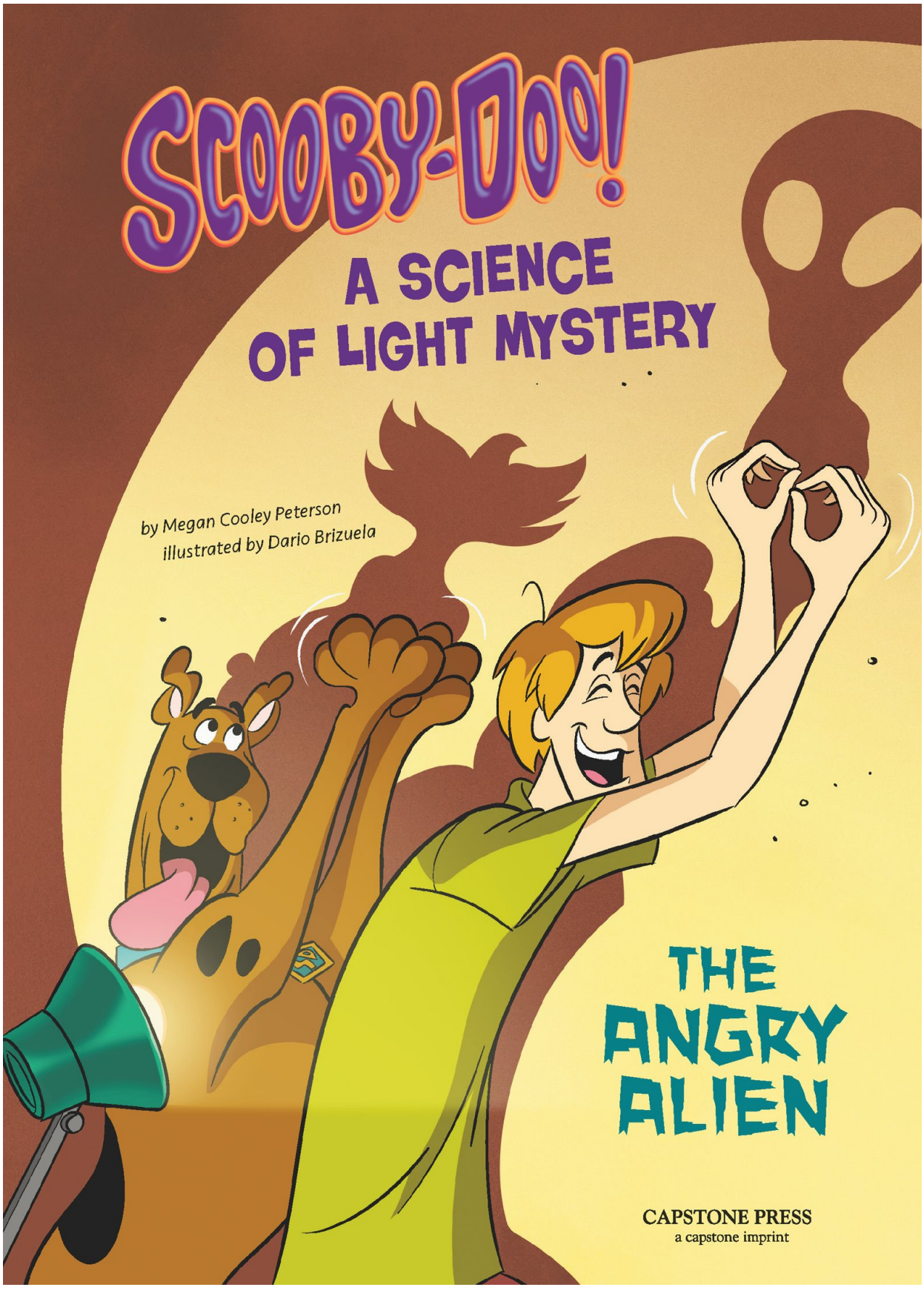
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THE ANGRY ALIEN
CAPSTONE PRESS
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Scooby- Doo and the gang drove home from a day at the beach.

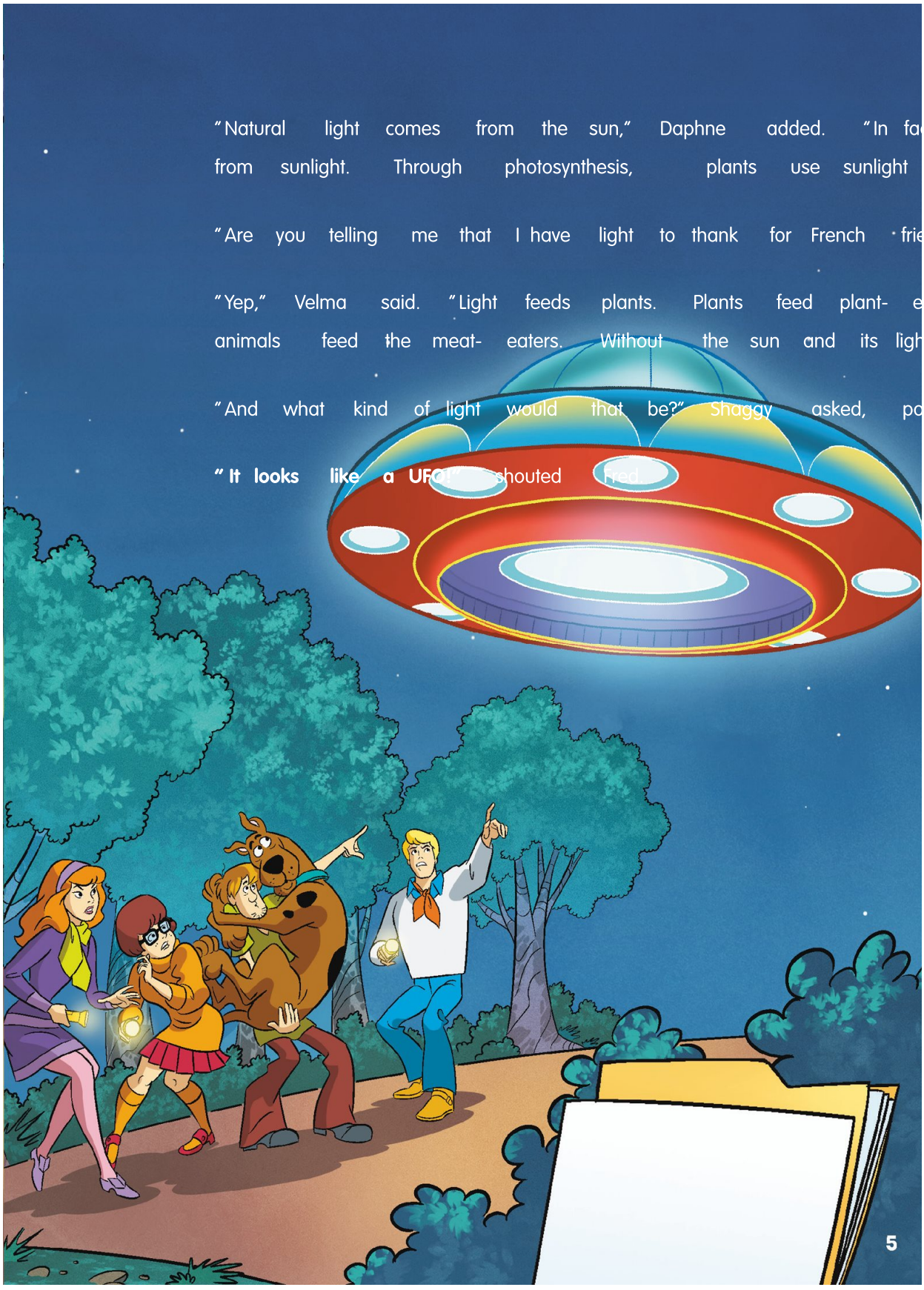
"Man, all that sand and sun sure make a person hungry," Shaggy s

"Rungry," Scooby- Doo agreed.

"There might be some sandwiches left in the cooler," Velma said.

"I wish it weren't so dark tonight," Shaggy said. "I can't see what I'm doing! Good thing I can smell a sandwich from a mile away!"

"Those woods look awfully creepy," Daphne whispered.
"It's a good thing we have these flashlights," Fred said. "Or we'd be walking in total darkness."
"Like, how do we make light, anyway?" Shaggy asked.


"Natural light comes from the sun," Daphne added. "In fa
from sunlight. Through photosynthesis, plants use sunlight
"Are you telling me that I have light to thank for French fri
"Yep," Velma said. "Light feeds plants. Plants feed plant- e
animals feed the meat- eaters. Without the sun and its ligh
"And what kind of light would that be?" Shaggy asked, po
"It looks like a UFO!" shouted Fred.

"That UFO disappeared into thin air," Daphne said. "How strange."
"Strange, indeed," agreed Velma. "Maybe someone in town will able to explain what's going on."
"I hope we don't run into any aliens," Shaggy added.
"Raliens?" asked Scooby.

Lila's
LUMINOUS LAMPS

"This is the only open store in town," said

"Um, Fred," Shaggy said. "I don't know it

"Why not?" Fred asked.

"Ralien!" Scooby exclaimed, pointing at

"There's only one way to find out," Velma

"Whew! We, like, thought you were an alien," Shaggy

"I'm no alien. I'm Lila," the woman said. "Can I intere

"Actually," Fred said, "our van broke down. But the

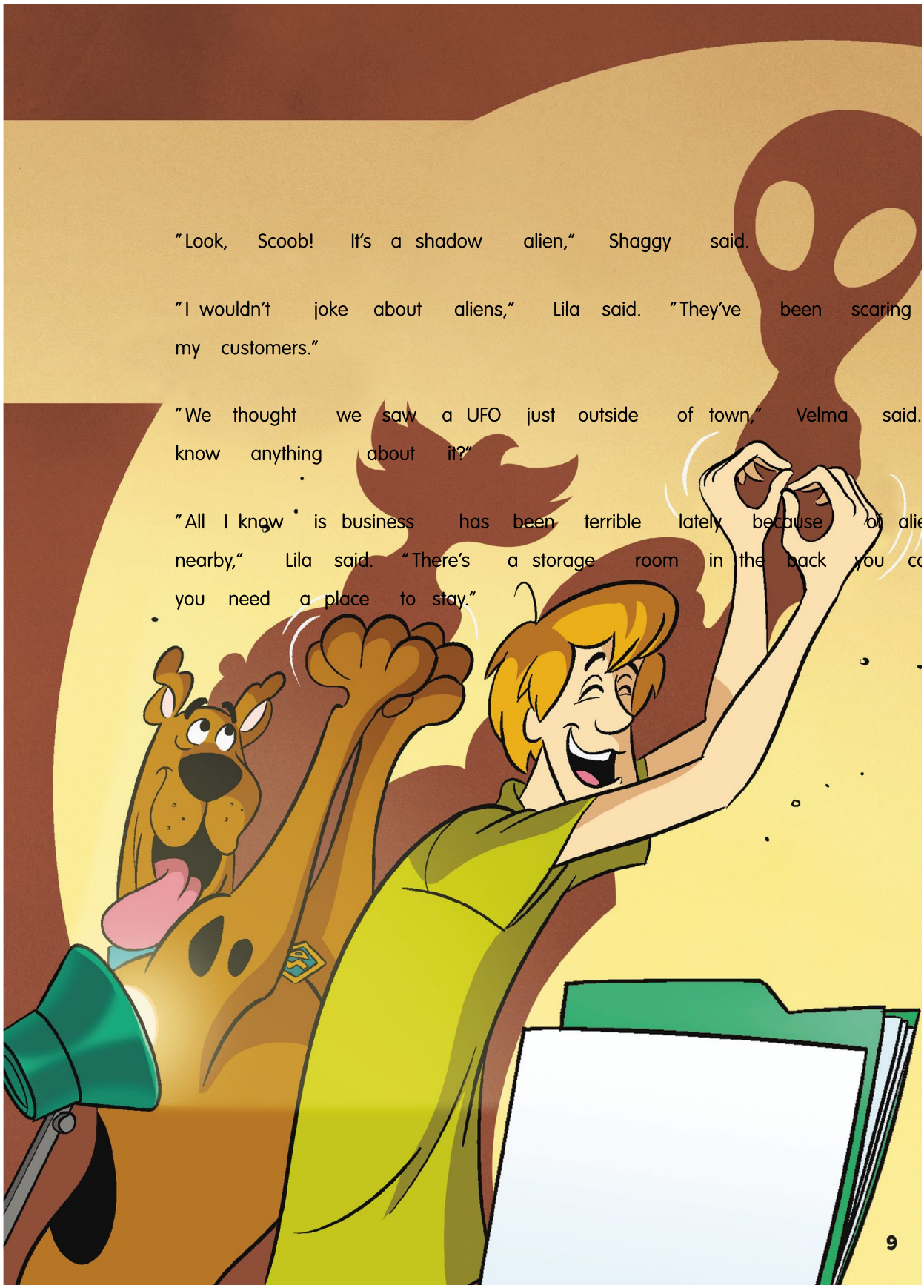
Shaggy put on his sunglasses. "This is one bright st

"I guess all light doesn't come from the sun."

"All natural light comes from the sun," Velma said. to make light."

"Velma's right," said Daphne. "Inside an incandescent
called a filament. When electricity passes through t
glows by releasing photons."

"But incandescent bulbs produce a lot of unwanted
They waste more energy than other types of light b


"Look, Scoob! It's a shadow alien," Shaggy said.
"I wouldn't joke about aliens," Lila said. "They've been scaring my customers."
"We thought we saw a UFO just outside of town," Velma said. know anything about it?"
"All I know is business has been terrible lately because of alie nearby," Lila said. "There's a storage room in the back you co you need a place to stay."

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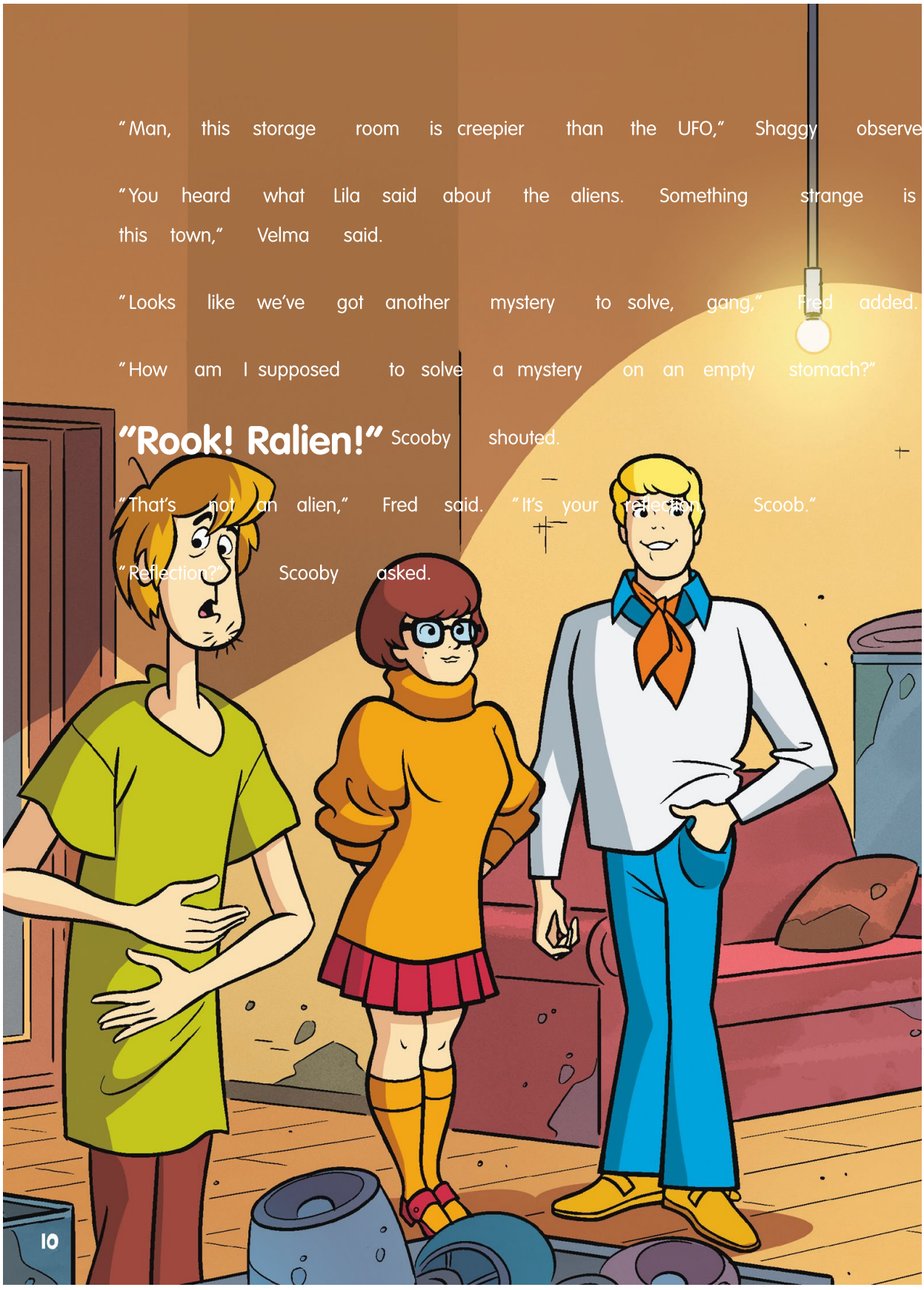
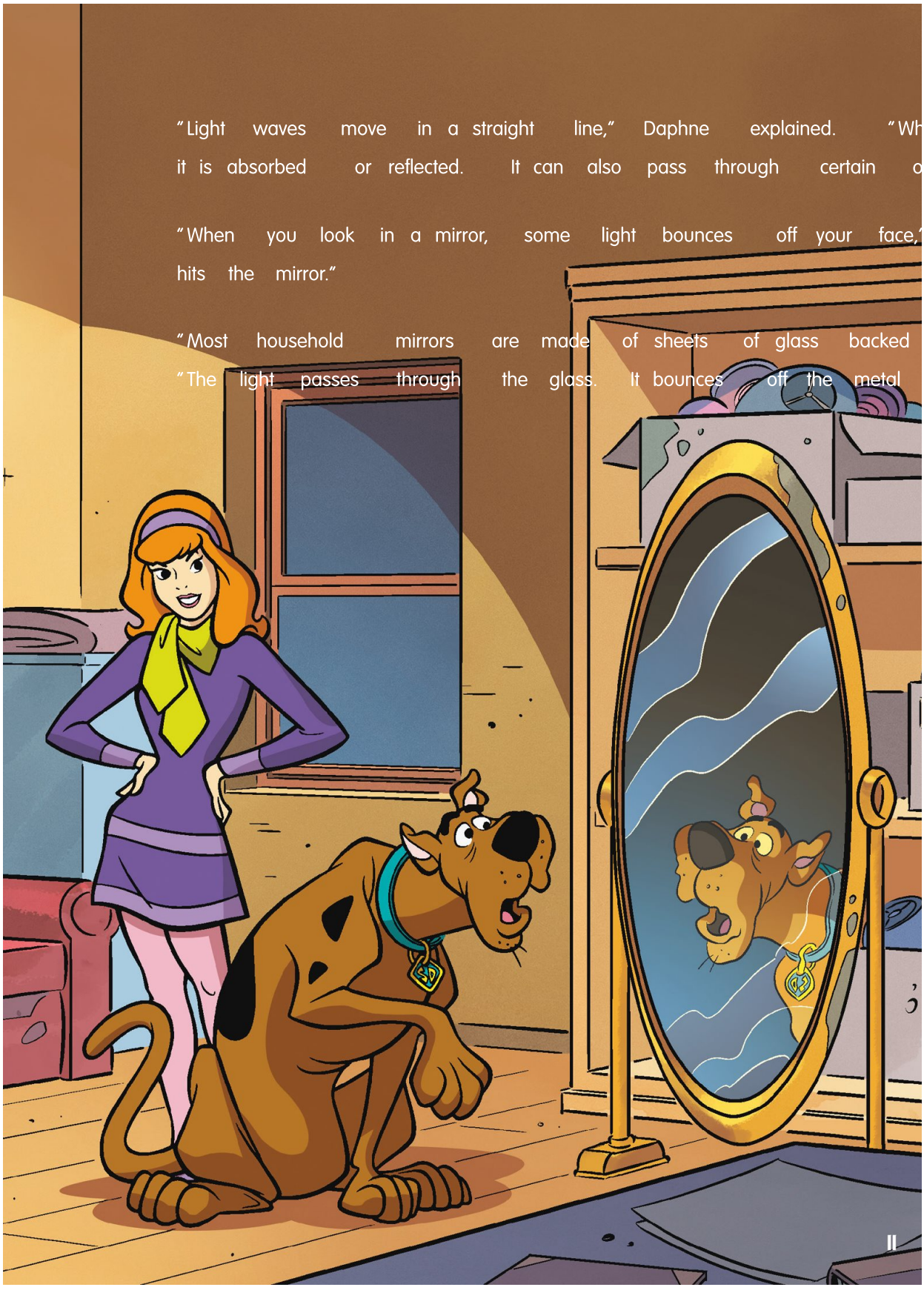

"Man, this storage room is creepier than the UFO," Shaggy observe
"You heard what Lila said about the aliens. Something strange is this town," Velma said.
"Looks like we've got another mystery to solve, gang," Fred added.
"How am I supposed to solve a mystery on an empty stomach?"
"Rook! Ralien!" Scooby shouted.
"That's not an alien," Fred said. "It's your reflection, Scoob."
"Reflection?" Scooby asked.
10


"Light waves move in a straight line," Daphne explained. "Wh
it is absorbed or reflected. It can also pass through certain o
"When you look in a mirror, some light bounces off your face,
hits the mirror."
"Most household mirrors are made of sheets of glass backed
"The light passes through the glass. It bounces off the metal

"Oh, look," Shaggy said,
someone outside carrying
"Those aren't flashlights,"
"They're glowing alien
"Let's go investigate!" Velm

"Man, that alien is faster than the M
"We tried to catch it, but it disappeared

"Rast ralien," agreed Scooby.

"Something, or someone, tampered
"The electricity's been cut off."

"And there's a pile of screws lying o

"I hope the next clue leads us to a p
muttered Shaggy.

"What happened to your lamps?" Fred asked
"We didn't hear a thing over Shaggy's loud sn
"I told you— it's the alien! It broke all these lar
more," said Lila.
"Like, why would an alien want a bunch of la
must be using lamp parts to build another

"Look!" Daphne said. "Scooby found more screws."

"Do you know anything about these screws?" Velma asked. "We found some near your broken electrical box."

Lila shrugged. "They don't look familiar to me."

"Let's walk back to the van and drive it to the repair shop," Fred said. "We can ask if the mechanic knows what happened."

"Do you know anything about the alien that v
Velma asked the mechanic later that morning.
"Aliens don't exist," the mechanic scoffed.
"Rook!" said Scooby. "Rews!"
"Don't touch those screws," said the mechanic.
next order won't get here until next week."
"Zoinks!" Shaggy pointed to a strange ligh
like playing tricks on my eyes— I'm seeing rai
15

"The rainbow isn't from an
from my daughter, Iris."

"Like, whew," said Shaggy.
can make rainbows."

"This is a prism," Iris said. "

"Is refraction anything like s
said Shaggy.

"Not exactly," Fred said. "Visible light looks white t
of all colors. Each color has a different wavelength."

"Each wavelength bends at a different angle as it
Velma continued. "The prism separates the different
so a rainbow appears."

"Refraction isn't the only way we see colors," said
red because it reflects only red light. It absorbs all

"Black objects absorb most colors," added Fred. "
all the colors."

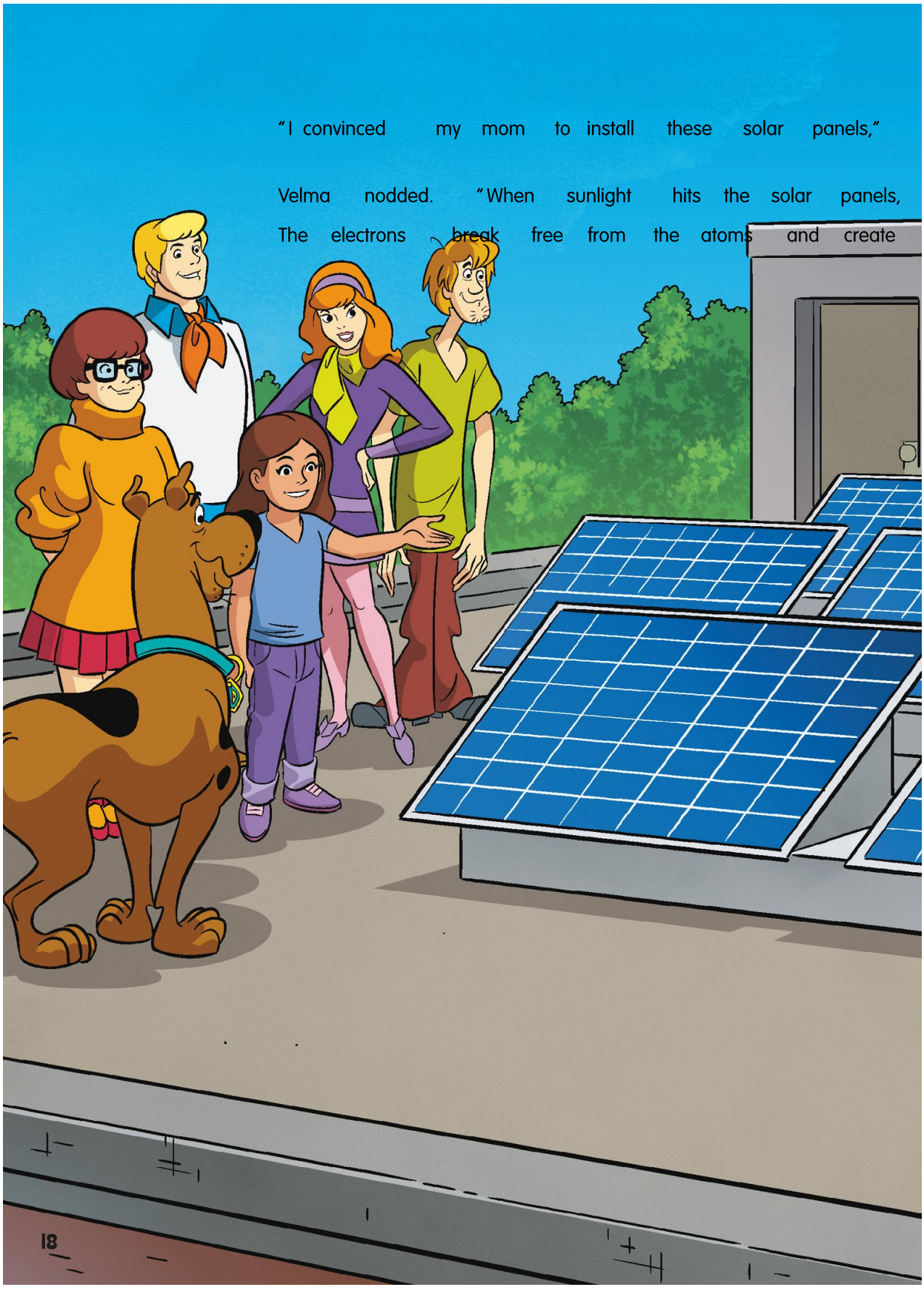
"There's even more to light than refraction and wa
"Let me show you our solar panels."

part

of

part

of


"I convinced my mom to install these solar panels,"
Velma nodded. "When sunlight hits the solar panels,
The electrons break free from the atoms and create

"Solar power is better for the
fuels," said Fred.

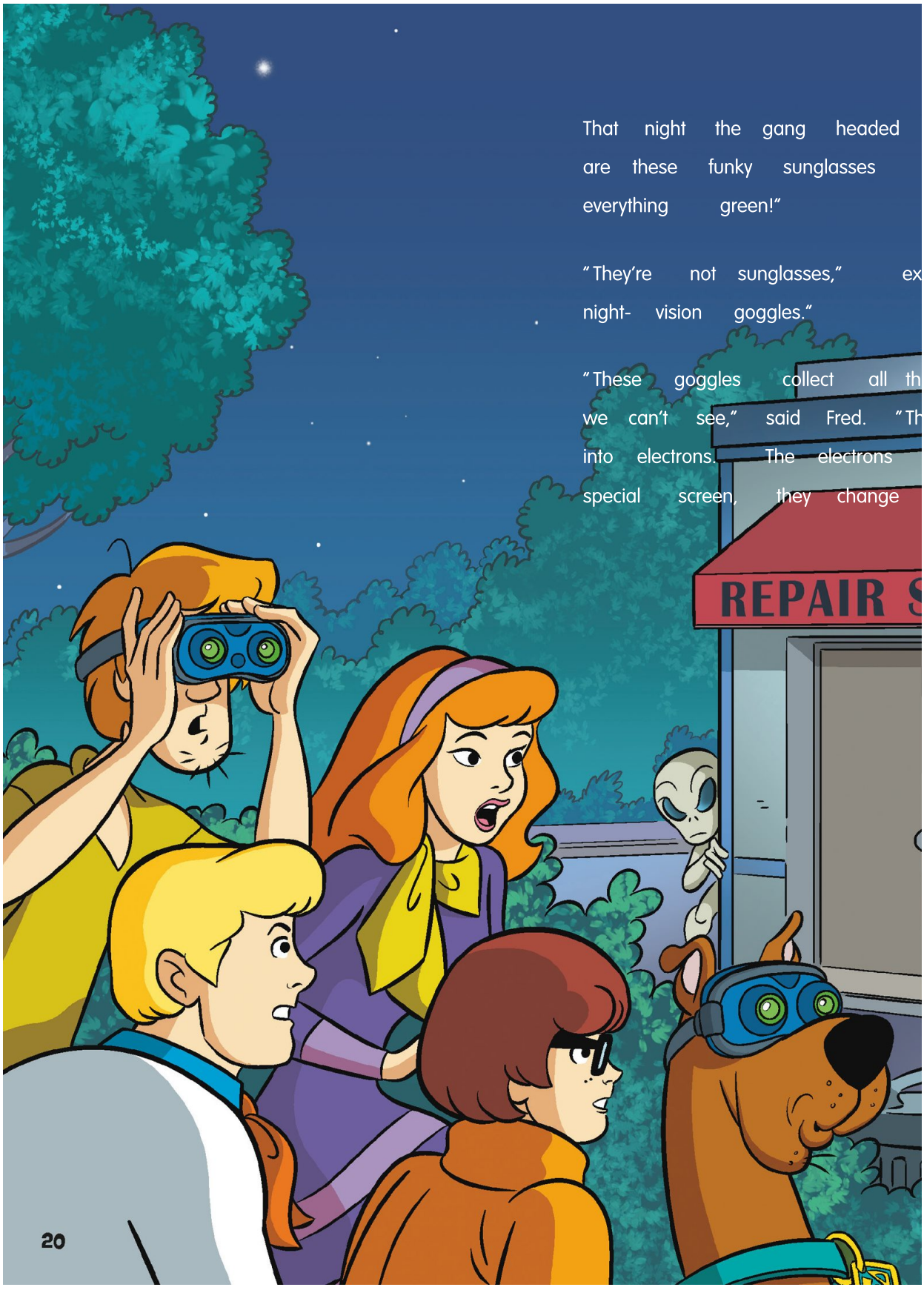
"I've been trying to get the wh
Iris said. "But so far, no one w

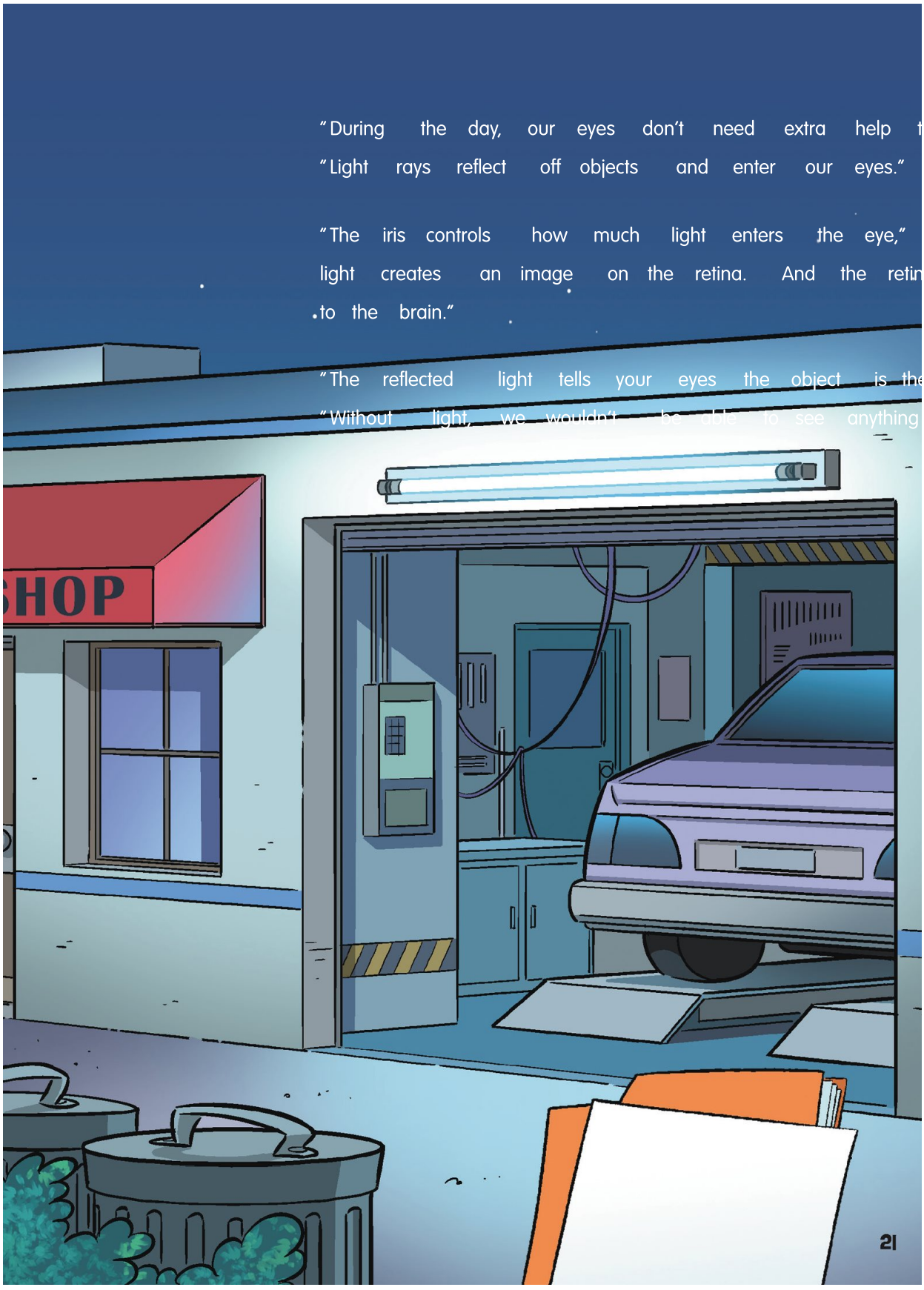
"There's something shady about that mechanic an turning up," Velma said.

"Let's come back tonight," Fred suggested.

Scooby's stomach growled. "Rungry," he said.

"Scooby and I are, like, totally on the same wavelen Shaggy said.


That night the gang headed
are these funky sunglasses
everything green!"
"They're not sunglasses," ex
night- vision goggles."
"These goggles collect all th
we can't see," said Fred. "Th
into electrons. The electrons
special screen, they change
REPAIR S


"During the day, our eyes don't need extra help t
"Light rays reflect off objects and enter our eyes."
"The iris controls how much light enters the eye,"
light creates an image on the retina. And the retin
to the brain."
"The reflected light tells your eyes the object is the
"Without light, we wouldn't be able to see anything
SHOP

"Look!" Daphne shouted. "The alien! It's running toward the woods!"
"After it, gang!" said Fred.

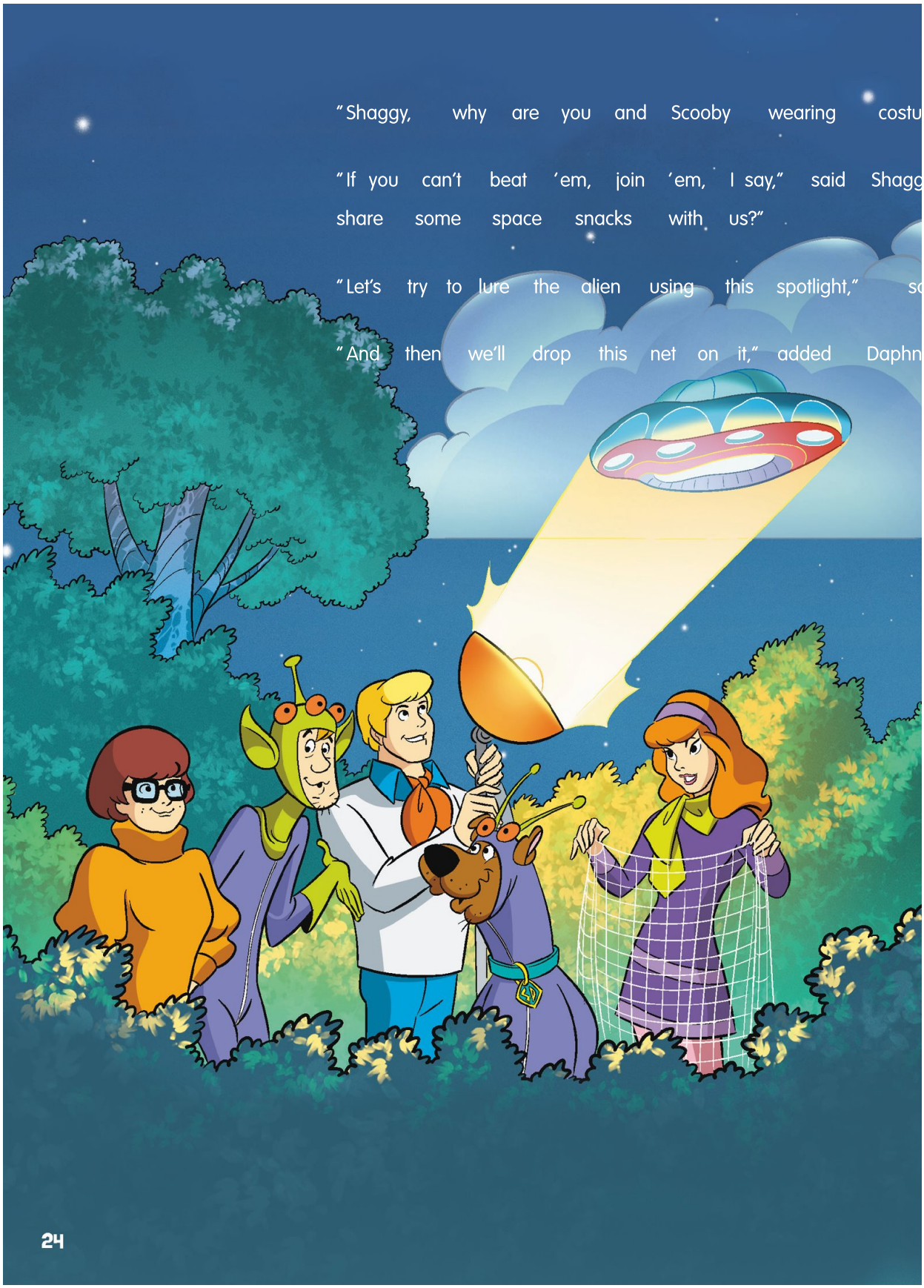
"Look what Scoob found! How does the alien fly in asked Shaggy.

"Not so fast," said Fred. "It's a toy helicopter. Someone

"I found Iris's prism in the grass," Shaggy said. "Who

"It's time to shine some light on this mystery," said

Shaggy gulped. "I was afraid you'd say that."


"Shaggy, why are you and Scooby wearing costu
"If you can't beat 'em, join 'em, I say," said Shagg
share some space snacks with us?"
"Let's try to lure the alien using this spotlight," s
"And then we'll drop this net on it," added Daphn

"Zoinks! It worked!" shout

"What's going on?" the mechanic asked, joining

"We caught the alien!" Velma said. "Time to see
Scooby peeled off the alien's mask.

"Iris?" said her mother.

"Rews!" Scooby said, pointing to the tiny horns

"Like, I think we solved the alien mystery, and th
screws," Shaggy said.

"I've been trying to scare Lila into using energy
in her store. But she won't listen to me!" said Iris

"So you broke her lamps and tampered with the

"And I would have gotten away with it if it weren't
out-of-towners!" said Iris.

"Well, gang, it looks like our work here is done," said Fred.
"Not quite," said Shaggy. "We have one more mystery to sol
"What's that?" asked Velma.
"The mystery of where to find some out- of- this- world cheeseburgers!" Shaggy said.
"Hee hee hee!" Scooby giggled and licked his lips.
THE END

GLOSSARY

atom (AT-uhm)— the smallest particle of an element

CFL —a bulb that produces light when electricity flows type of gas; CFL is short for compact fluorescent light

electricity (i-lek- TRIS- i-tee)— a flow of electrons that c heat or to make machines work

electron (i-LEK- tron)— a tiny particle in an atom that t

fossil fuels (FAH- suhl FYOOLZ)— natural fuels formed and animals; coal, oil, and natural gas are fossil fuels

incandescent bulb (in- kuhn- DES- uhnt buhlb)— a bulb heats its filament causing it to glow

infrared (in- fruh- RED)— invisible light that is next to re

LED —an LED is an electronic device that emits light w LED is short for light- emitting diode

photon (FOH- ton)— a particle or unit of light

radio waves (RAY- dee- oh WAYV)— invisible low- energ

and TV

reflection (ri- FLEK- shun)— the change in direction of li

refraction (ri- FRAKT- shun)— the bending of light; light through a prism or a lens

retina (RET- uhn- uh)— the lining inside the back of the

solar power (SOH- lur POU- ur)— energy from the sun and electricity

wavelength (WAYV-length)— the distance between tw

X- ray (EKS- ray) —invisible high- energy light that can

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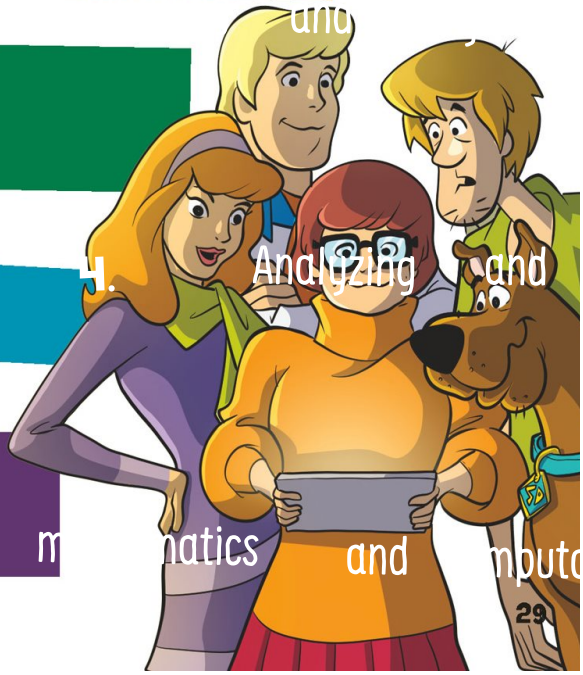
Developing and using

3.

4. Analyzing and

Using m natics and mputa



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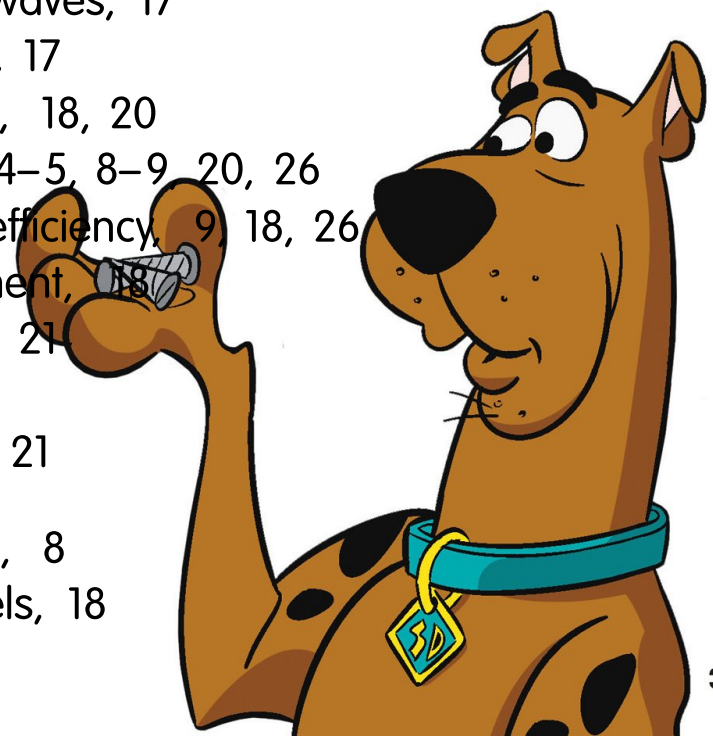

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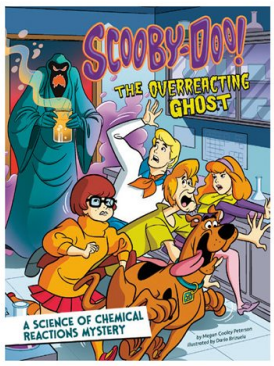
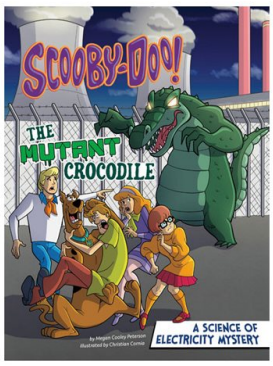
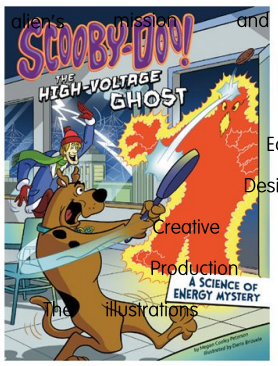
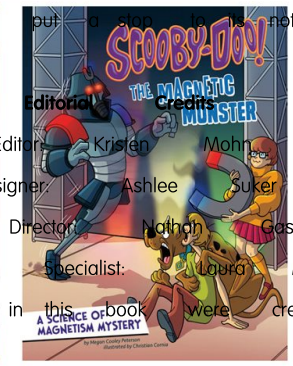
when they see a UFO and an alien who seems determin
lighting store. But why? Join the gang as they use
alien's mission and put a stop to the not-s









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